1 Identification

- Product identifier
- Trade name: 1,3-Dichloropropane
- Part number: RHH-038
- CAS Number: 142-28-9
- EC number: 205-531-3
- Index number: 602-020-00-0
- Relevant identified uses of the substance or mixture and uses advised against
  Reagents and Standards for Analytical Chemical Laboratory Use
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier: Agilent Technologies Australia Pty Ltd
  679 Springvale Road
  Mulgrave
  Victoria 3170, Australia
- Further information obtainable from:
  Telephone: 1800 802 402
  e-mail: pdl-msds_author@agilent.com
- Emergency telephone number: CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- Classification of the substance or mixture
  Flam. Liq. 3 H226 Flammable liquid and vapour.
  Acute Tox. 4 H332 Harmful if inhaled.
  Skin Irrit. 2 H315 Causes skin irritation.
  Eye Irrit. 2A H319 Causes serious eye irritation.

- Label elements
- GHS label elements
  The substance is classified and labelled according to the Globally Harmonised System (GHS).
- Hazard pictograms
  GHS02  GHS07

- Signal word Warning

(Contd. on page 2)
Safety Data Sheet
according to WHS Regulations

Trade name: 1,3-Dichloropropane

- Hazard-determining components of labelling:
  1,3-dichloropropane

- Hazard statements
  Flammable liquid and vapour.
  Harmful if inhaled.
  Causes skin irritation.
  Causes serious eye irritation.

- Precautionary statements
  If medical advice is needed, have product container or label at hand.
  Keep out of reach of children.
  Read label before use.
  Keep away from heat/sparks/open flames/hot surfaces. No smoking.
  Keep container tightly closed.
  Ground/bond container and receiving equipment.
  Use explosion-proof electrical/ventilating/lighting equipment.
  Use only non-sparking tools.
  Take precautionary measures against static discharge.
  Avoid breathing dust/fume/gas/mist/vapours/spray.
  Wash thoroughly after handling.
  Use only outdoors or in a well-ventilated area.
  Wear protective gloves/protective clothing/eye protection/face protection.
  IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
  IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  Call a POISON CENTER/doctor if you feel unwell.
  Specific treatment (see on this label).
  IF skin irritation occurs: Get medical advice/attention.
  IF eye irritation persists: Get medical advice/attention.
  Take off contaminated clothing and wash before reuse.
  In case of fire: Use for extinction: CO₂, powder or water spray.
  Store in a well-ventilated place. Keep cool.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

- Other hazards
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

3 Composition and Information on Ingredients

- Chemical characterisation: Substances
  - CAS No. Description
    142-28-9 1,3-dichloropropane
  - Identification number(s)
    - EC number: 205-531-3
    - Index number: 602-020-00-0

(Contd. of page 3)
Trade name: 1,3-Dichloropropane

4 First Aid Measures

- Description of first aid measures
- General information:
  Immediately remove any clothing soiled by the product. Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- After inhalation:
  Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.
- After skin contact:
  Immediately wash with water and soap and rinse thoroughly.
- After eye contact:
  Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing:
  If symptoms persist consult doctor.

5 Fire Fighting Measures

- Extinguishing media
- Suitable extinguishing agents:
  CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
  - Protective equipment: Mouth respiratory protective device.

6 Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and Storage

- Handling:
  - Precautions for safe handling
    Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols.
Trade name: 1,3-Dichloropropane

- Information about fire - and explosion protection:
  Keep ignition sources away - Do not smoke.
  Protect against electrostatic charges.

- Conditions for safe storage, including any incompatibilities

- Storage:
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep container tightly sealed.

- Specific end use(s) No further relevant information available.

8 Exposure controls and personal protection

- Additional information about design of technical facilities: No further data; see item 7.

- Control parameters
  - Ingredients with limit values that require monitoring at the workplace: Not required.
  - Additional information: The lists valid during the making were used as basis.

- Exposure controls
  - Personal protective equipment:
    - General protective and hygienic measures:
      Keep away from foodstuffs, beverages and feed.
      Immediately remove all soiled and contaminated clothing
      Wash hands before breaks and at the end of work.
      Avoid contact with the eyes and skin.
    - Respiratory protection:
      When used as intended with Agilent instruments the use of the product under normal laboratory conditions and
      with standard practices does not result in significant airborne exposures and therefore respiratory protection is not
      needed.
      Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved
      device equipment with appropriate organic or acid gas cartridge.
    - Protection of hands:
      Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil
      thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct
      contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times
      exceeding 4 hrs. Supplier recommendations should be followed.
    - Material of gloves
      For normal use: nitrile rubber, 11-13 mil thickness
      For direct contact with the chemical: butyl rubber, 12-15 mil thickness
      The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and
      varies from manufacturer to manufacturer.
  - Penetration time of glove material
    For normal use: nitrile rubber: 1 hour
    For direct contact with the chemical: butyl rubber: > 4 hours
Trade name: 1,3-Dichloropropane

9 Physical and Chemical Properties

- Information on basic physical and chemical properties
  - General Information
    - Appearance:
      - Form: Fluid
      - Colour: Not determined.
    - Odour:
      - Odour threshold: Not determined.
    - pH-value: Not determined.
  - Change in condition
    - Melting point/freezing point: -99.5 °C
    - Initial boiling point and boiling range: 120.4 °C
  - Flash point: 36 °C
  - Flammability (solid, gas): Not applicable.
  - Ignition temperature: 480 °C
  - Decomposition temperature: Not determined.
  - Auto-ignition temperature: Not determined.
  - Explosive properties:
    - Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
  - Explosion limits:
    - Lower: Not determined.
    - Upper: Not determined.
  - Vapour pressure at 20 °C: 20 hPa
  - Density at 20 °C: 1.19 g/cm³
  - Relative density: Not determined.
  - Vapour density: Not determined.
  - Evaporation rate: Not determined.
  - Solubility in / Miscibility with water: Not miscible or difficult to mix.
  - Partition coefficient: n-octanol/water: Not determined.
  - Viscosity:
    - Dynamic: Not determined.
    - Kinematic: Not determined.
  - Solvent content:
    - VOC (EC) 0.00 %
Trade name: 1,3-Dichloropropane

10 Stability and Reactivity

- **Reactivity**: No further relevant information available.
- **Chemical stability**
  - **Thermal decomposition / conditions to be avoided**: No decomposition if used according to specifications.
  - **Possibility of hazardous reactions**: No dangerous reactions known.
- **Conditions to avoid**: No further relevant information available.
- **Incompatible materials**: No further relevant information available.
- **Hazardous decomposition products**: No dangerous decomposition products known.

11 Toxicological Information

- **Information on toxicological effects**
- **Acute toxicity**
  - **LD/LC50 values relevant for classification**:
  - **ATE (Acute Toxicity Estimates)**
    - Oral LD50: 3,300 mg/kg (rat)
    - Inhalative LC50/4 h: 11 mg/L
  - **142-28-9 1,3-dichloropropane**
    - Oral LD50: 3,300 mg/kg (rat)
- **Primary irritant effect**:
  - **Skin corrosion/irritation**: Irritant to skin and mucous membranes.
  - **Serious eye damage/irritation**: Irritating effect.
  - **Respiratory or skin sensitisation**: No sensitising effects known.

12 Ecological Information

- **Toxicity**
- **Aquatic toxicity**: No further relevant information available.
- **Persistence and degradability**: No further relevant information available.
- **Behaviour in environmental systems**:
  - **Bioaccumulative potential**: No further relevant information available.
  - **Mobility in soil**: No further relevant information available.
- **Additional ecological information**:
- **General notes**:
  - **Water hazard class 3** (German Regulation) (Self-assessment): extremely hazardous for water
  - Do not allow product to reach ground water, water course or sewage system, even in small quantities.
  - Danger to drinking water if even extremely small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
  - **PBT**: Not applicable.
  - **vPvB**: Not applicable.
- **Other adverse effects**: No further relevant information available.
13 Disposal considerations

- Waste treatment methods
- Recommendation
  Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packaging:
- Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
- ADG, IMDG, IATA
  UN1993

- UN proper shipping name
- ADG
  1993 FLAMMABLE LIQUID, N.O.S. (1,3-dichloropropane)
- IMDG, IATA
  FLAMMABLE LIQUID, N.O.S. (1,3-dichloropropane)

- Transport hazard class(es)
- ADG, IMDG, IATA

  - Class
    - 3 Flammable liquids.
  - Label
    - 3

- Packing group
- ADG, IMDG, IATA
  III

- Environmental hazards:
  Not applicable.

- Special precautions for user
- Warning: Flammable liquids.
- Danger code (Kemler):
  - 30
- EMS Number:
  - 3-07
- Stowage Category
  - A

- Transport in bulk according to Annex II of Marpol and the IBC Code
  Not applicable.

- Transport/Additional information:

  - ADG
    - Limited quantities (LQ)
      - 5L
    - Excepted quantities (EQ)
      - Code: E1
      - Maximum net quantity per inner packaging: 30 ml
      - Maximum net quantity per outer packaging: 1000 ml
    - Transport category
      - 3
    - Tunnel restriction code
      - D/E
Trade name: 1,3-Dichloropropane

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
  · Australian Inventory of Chemical Substances
    Substance is listed.
  · Standard for the Uniform Scheduling of Medicines and Poisons
    Substance is not listed.
  · Directive 2012/18/EU
    · Named dangerous substances - ANNEX I Substance is not listed.
    · Seveso category P5c FLAMMABLE LIQUIDS
  · Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
  · Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
  · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· Department issuing SDS: Document Control / Regulatory
· Contact: regulatory@ultrasci.com
· Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  IATA: International Air Transport Association
  EINECS: European Inventory of Existing Commercial Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  VOC: Volatile Organic Compounds (USA, EU)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Flam. Liq. 3: Flammable liquids – Category 3
  Acute Tox. 4: Acute toxicity – Category 4
  Skin Irrit. 2: Skin corrosion/irritation – Category 2
  Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A